

Strand: Data Management

Grade: 5

School: Northwood

Lesson Goal(s)	<ul style="list-style-type: none">- To have students represent information in a graph and discuss the appropriateness of different graphs- To have students draw conclusions from their graphs
Curriculum Expectations	<ul style="list-style-type: none">- Collect and organize discrete or continuous primary data and secondary data and display the data in charts, tables, and graphs (including broken-line graphs) that have appropriate titles, labels, and scales that suit the range and distribution of the data, using a variety of tools- Read, interpret, and draw conclusions from primary data and from secondary data presented in charts, tables, and graphs (including broken-line graphs)
Big Idea(s)	<ul style="list-style-type: none">- Graphs are powerful data displays because they quickly reveal a great deal of information

3 Part Lesson Plan		Materials
Getting Started (Minds On...)		
Instructional Grouping: Whole class <ul style="list-style-type: none">- The teacher polls the class on their favourite cupcake flavor – chocolate, vanilla or cherry. Students respond by a show of hands and the teacher records this information in a tally chart on the document camera- Using a think-pair-share strategy, students are asked how they might represent this information		
Working On It (Action!)		
Instructional Grouping: Small groups <ul style="list-style-type: none">- Students are told of an upcoming fundraiser involving the sale of cupcakes- The teacher assigns one of the parallel tasks (increasing in complexity from vanilla to cherry to chocolate) to pre-determined, ability based groups (attached below)- Each group is asked to come up with a way to present their information, using a graph of their choice, to their Principal- After some time working, each group is then asked to use the information from their graph to predict how many cupcakes will be sold this year so that their teacher can buy the right amount of ingredients		<ul style="list-style-type: none">- Problem sheets for groups (see below)- Chart paper- Graph paper- Markers- Variety of manipulatives
Reflecting and Connecting (Consolidate/Debrief)		
Debrief Strategy: Math Congress <ul style="list-style-type: none">- Groups of students will share their presentations, explaining to the class why they chose the graph they did and why they felt it was effective- Teacher will highlight strengths/weaknesses of different types of graphs for representing different kinds of information- Groups will then discuss how they used their graphs to predict how many cupcakes will be sold this year		
Follow-up		

Bake Sale

Task: Northwood's 5th annual Day of Pink Cupcakes is quickly approaching so we need to start planning! Over the last 5 years the sales have shown the following:

Year	Vanilla
Year 1	5
Year 2	10
Year 3	15
Year 4	20

Problem: If you had to make a presentation to Mrs. Barlow, how would you best present the information using a graph for her to see? Use the materials at your table groups to solve the problem and to communicate your answer.

Challenge: Use your answers to predict about how many vanilla cupcakes might be purchased in the 5th year of the bake sale.

Bake Sale

Task: Northwood's 5th annual Day of Pink Cupcakes is quickly approaching so we need to start planning! Over the last 5 years the sales have shown the following:

Year	Cherry
Year 1	40
Year 2	52
Year 3	65
Year 4	80

Problem: If you had to make a presentation to Mrs. Barlow, how would you best present the information using a graph for her to see? Use the materials at your table groups to solve the problem and to communicate your answer.

Challenge: Use your answers to predict about how many cherry cupcakes might be purchased in the 5th year of the bake sale.

Bake Sale

Task: Northwood's 5th annual Day of Pink Cupcakes is quickly approaching so we need to start planning! Over the last 5 years the sales have shown the following:

Year	Chocolate
Year 1	70
Year 2	125
Year 3	160
Year 4	225

Problem: If you had to make a presentation to Mrs. Barlow, how would you best present the information using a graph for her to see? Use the materials at your table groups to solve the problem and to communicate your answer.

Challenge: Use your answers to predict about how many chocolate cupcakes might be purchased in the 5th year of the bake sale.